

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**438L Unit
Chemtura Corporation – Geismar Plant
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 1433
Activity Number: PER20060009
Draft Permit 3041-V0**

The regulatory basis for the Statement of Basis is found in 40 Code of Federal Regulations (CFR) § 70.7 Permit issuance, renewals, reopenings, and revisions, subsection (a), paragraph (5) and the Louisiana Administrative Code (LAC), Title 33, Part III. AIR. Specifically §531. Public Notice and Affected State Notice, subsection A, paragraph 4. LAC 33:III.531.A.4 states:

“The permitting authority shall provide a statement that sets forth the legal and factual basis for the proposed permit conditions of any permit issued to a Part 70 source, including references to the applicable statutory or regulatory provisions. The permitting authority shall send this statement to any person who requests it and to EPA.”

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I. APPLICANT:

Company:

Chemtura Corporation – Geismar Plant
P.O. Box 397
Geismar, Louisiana 70734-0397

Facility:

438L Unit
36191 Highway 30, Geismar, Ascension Parish, Louisiana
Approximate UTM coordinates are 692.15 kilometers East and 3340.67 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

Chemtura Corporation (Chemtura) operates an integrated chemical production facility approximately 0.9 miles from Geismar, in Ascension Parish (the Geismar Plant). Ascension Parish is currently designated as “marginal” non-attainment for the 8-hour ozone national ambient air quality standard; VOC and NO_x are the regulated air pollutants for ozone. The Geismar Plant is a major source subject to the Part 70 operating permit program because it has the potential to emit 100 or more tons per year of VOC and NO_x. In addition, the Geismar Plant has the potential to emit 10 or more tons per year of a single TAP and 25 or more tons per year of aggregate TAPs/HAPs. The 438L Unit, however, does not emit HAPs or TAPs.

Chemtura’s facility is bordered by BASF Corporation to the south, Rubicon to the west, Westlake Chemicals to the north, and Louisiana Highway 30 to the east. Nearest residences to the site are communities located in Geismar, Louisiana and on LA. Highway 73. In 2001, the company’s name was changed from Uniroyal Chemical Co., Inc. to Crompton Manufacturing Company, Inc. (Crompton). In 2006, the company’s name was changed from Crompton to Chemtura USA Corporation (Chemtura) and then from Chemtura USA Corporation to Chemtura Corporation (also Chemtura).

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The Geismar Plant produces synthetic rubber and specialty rubber chemicals used as processing aids, anti-ozonants, and accelerators in the synthetic rubber and plastics processing industry in producing such items as automobile tires, rubber hoses, foam rubber gaskets, roofing shingles, etc. The process units that exist on this site include the Royalene® Unit, the Trilene® Unit, the Flexzone® Unit, the Thiazoles® Unit, the Celogen® OT-MBT Unit, the Celogen® AZ Unit, the Maleic Hydrazide/ Mercaptobenzothiazole (MH/MBT) Unit, the Para-aminodiphenylamine (UBOB) Unit, the 2,6-di-tertiary-butyl-paracresol/2,2-dimethylhydrazide (BHT/B-NINE) Unit, the Sulfur Recovery Unit, and the Naugalube® 438L Unit. Support facilities on site include the Wastewater Treatment Plants and a Maintenance/Lab Area.

Timely applications for initial Part 70 Title V permits were submitted by the company and all corresponding initial Part 70 Title V permits have been granted by the permitting authority.

This Part 70 operating permit is for the Naugalube® 438L Unit, (hereinafter “438L Unit”). The 438L Unit currently operates under the 438L project Exemption Activity No. PER20040012, dated December 30, 2004. The Geismar Plant has been in operation since 1962; however, the 438L Unit began construction in January 2005 and startup occurred in July 2005.

Initial/Modification Title V Part 70 permits that were issued by the Department of Environmental Quality (the Department) include:

Permit #	Units or Sources	Date Issued
2305-V1	Sulfur Recovery Unit	10/16/2003
2327-V2	MH/MBT Unit	10/25/2003
2292-V1	Wastewater Treatment Plant	12/30/2004 and amended 05/19/2005
2333-V1	Flexzone Unit	12/30/2004 and amended 04/20/2005
2531-V1	Royalene WWTP	02/25/2005 and amended 07/08/2005
2242-V1	Celogen® OT-MBT Unit	08/26/05

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Permit #	Units or Sources	Date Issued
2041-V0 (0180-00012-V0)	Royalene and Trilene Units	08/05/2005 and amended 12/22/2005
2572-V3	BHT/B9 Unit	11/10/2005
1186C-V0	UBOB Unit	05/18/2006
2099-V2	Thiazloles® Unit	08/01/2006
514C-V2	Celogen® AZ Unit	09/29/2006
2551-V1	Services and Laboratory	02/05/2007

Initial/Renewal/Modification Title V Part 70 permits that are under review by the Department include:

Permit #	Units or Sources	Date Issued
3041-V0	438L Unit	Permit Pending

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire (EIQ), were submitted by Chemtura on June 21, 2006, requesting an initial Part 70 Operating Permit.

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, Louisiana, on XXX XX, 2007, and in *The Gonzales Weekly*, Louisiana, on XXX XX, 2007, and published in the Office of Environmental Services Public Notice Mailing List on XXX XX, 2007. The proposed permit was also submitted to U.S. EPA Region VI for review and comment. All comments will be considered prior to the final permit decision.

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Project description

The 438L Unit produces Naugalube® 438L which is a liquid nonsulfur containing antioxidant for use in petroleum based and synthetic lubricants. Production of 438L begins with the combining of diphenylamine (DPA) and catalyst in a makeup (M/U) vessel. The DPA-catalyst slurry is then pumped from the M/U vessel to one of the two parallel batch reactors of the 438L Unit. Fresh and recovered nonenes are pumped to the reactor to be reacted with the DPA-catalyst slurry. Upon completion of the batch reaction, the raw 438L material is filtered to remove the catalyst and then refined in a stripper. Materials are collected for recycle. Tripropylene is a recovered byproduct of the 438L manufacturing process. The refined 438L product is sent to the product storage prior to being loaded into tank trucks and railcars for transport.

Process wastewater generated as part of the 438L process is sent to an existing wastewater treatment system that includes deep well injection as the final step. Emissions associated with processing the 438L effluent are included in the existing Wastewater Treatment Plant Permit. Utilities for the 438L process include steam from existing boilers and cooling water from existing cooling towers.

Permitted Air Emissions

This initial Part 70 operating permit allows for the following:

1. Reconciliation and updates to emission calculation methodologies and emission rates for currently permitted sources to reflect current operation based upon the most current understanding of process chemistry and the best available information.
2. Inclusion of EIQ No. 6711, 438L Storage Tank (EQT607).

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Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	<0.01	<0.01	0.0
SO ₂	-	-	-
NO _x	-	-	-
CO	-	-	-
VOC	4.86	4.31	-0.55

Air Modeling Analysis

For modeling analysis refer to Section VII of the draft Part 70 permit.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

IV. Regulatory Analysis

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms conditions and standards are provided in the Facility Specific Requirements Section of the draft permit.

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Prevention of Significant Deterioration Applicability/Nonattainment New Source Review

There is no physical change or change in the method of operations that result in a significant increase. The modifications/revisions proposed in this application do not trigger PSD/NNSR review.

Maximum Achievable Control Technology (MACT) Requirements

The Geismar Plant-438L Unit is part of a facility that is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. However, the 438L Unit does not emit TAPs.

National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

The requirements of Subpart FFFF applies to any one who owns or operates a miscellaneous organic chemical manufacturing process unit (MCPU), located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in section 112(a) of the Clean Air Act (CAA). 438L Unit is not a MCPU and does not emit HAPs.

40 CFR 64-Compliance Assurance Monitoring (CAM) Rule

Compliance Assurance Monitoring (CAM) is applicable to the facility, however, the 438L Unit does not have any emission unit with a potential to emit greater than or equal to 100% of the major source threshold, before taking controls into account (there are no control devices associated with the emission sources in the 438L Unit).

V. Permit Shields

A permit shield was not requested.

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VI. Periodic Monitoring

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the proposed permit.

VII. Applicability and Exemptions of Selected Subject Items

See Permit.

VIII. Streamlined Requirements

None

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IX. Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

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Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥10 tons per year of any toxic air pollutant; ≥25 tons of total toxic air pollutants; and ≥100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

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Sulfur Dioxide (SO₂) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.